

# Richard Kha

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 Richard Kha |  kRichard32  
Toronto, Ontario, Canada

## EDUCATION

### • University of Toronto

September 2021 - August 2025

B.Sc. in Computer Science (Honours), focus in Artificial Intelligence

Toronto, Canada

- GPA: 3.95/4.00
- Relevant coursework: Data Structures & Analysis, Algorithm design & Analysis, Operating Systems, Introduction to Databases, Introduction to Machine Learning, Introduction to Image Understanding, Knowledge Representation & Reasoning, Neural Networks & Deep Learning, Capstone Design Project

## SKILLS

- **Programming Languages:** Java, Python, C/C++, JavaScript, React.js
- **Database Systems:** PostgreSQL
- **Data Science & Machine Learning:** Pytorch, Scikit-learn, Numpy
- **Cloud Technologies:** Google Cloud Platform, Docker
- **Version Control:** Git, GitHub
- **Other:** Linux, Data Structures & Algorithms

## WORK EXPERIENCE

### • Optimizing remote JIT compilation for the JVM

May 2024 - August 2024

Undergraduate researcher (University of Toronto & IBM CAS)

- Developed benchmarking tools (Using Python, Java, Docker) to measure the speed of the JITServer
- Developed a scheduling algorithm in C++ which reduces client runtime by up to 9% in high load scenarios
- Co-wrote the [paper](#) on our findings and performed an oral presentation at HotInfra '24

### • Automating Data Analysis for Enhancing ASD Therapy Sessions

September 2024 - December 2024

Undergraduate researcher (University of Toronto)

- Implemented a diarization model (Deep neural network) from a recent paper and conducted tests to determine effectiveness of model
- Developed an improved version of the diarization model with increased accuracy in the child-adult speech scenario and implemented an algorithm to improve transcriptions accuracy
- Wrote a brief [report](#) on our findings

## SELECTED PROJECTS

### • Koko: [A social app for seniors]

July 2025 - Present

Tools: [Java spring boot, React.js, Firebase, PostgreSQL, WebRTC, Google OAuth]

[<https://kokosocial.ca/>]

- Developed an android app to support social communication within older adult communities with a strong focus on accessibility
- Full stack development; implemented both the front end mobile app and the java resource server for the app
- Created messaging, video calling services, user creation services, and matchmaking services
- Implemented a voice navigation feature for ease of use within the app

### • Neural Network Pokemon Image Classifier

May 2025 - June 2025

Tools: [PyTorch, Triton Inference Server, ONNX, Python, React]



- Implemented a convolutional neural network and trained it on a set of Pokemon images for classification
- Created a react GUI which connected to a python backend through REST endpoints

## HONORS AND AWARDS

### • Undergraduate Student Research Award (USRA)

May 2024 - September 2024

Natural Sciences and Engineering Research Council of Canada (NSERC)



- Award to support summer research done in 2024

## PUBLICATIONS

- [1] R. Kha, N. Sreekumar, A. Khrabrov, E. de Lara, A. Brown, M. Gabel, M. Pirvu. (2024). [Towards Optimal Remote JIT Compilation Scheduling for the JVM](#). 2nd Workshop on Hot Topics in System Infrastructure (HotInfra 2024) held in conjunction with SOSP 2024. November 2024.

## VOLUNTEER EXPERIENCE

### • Coding/Math Tutor

August 2021 - Present

YDC - Youth Dream Canada



- Mentored students in a 1 on 1 setting in computer science and math